



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

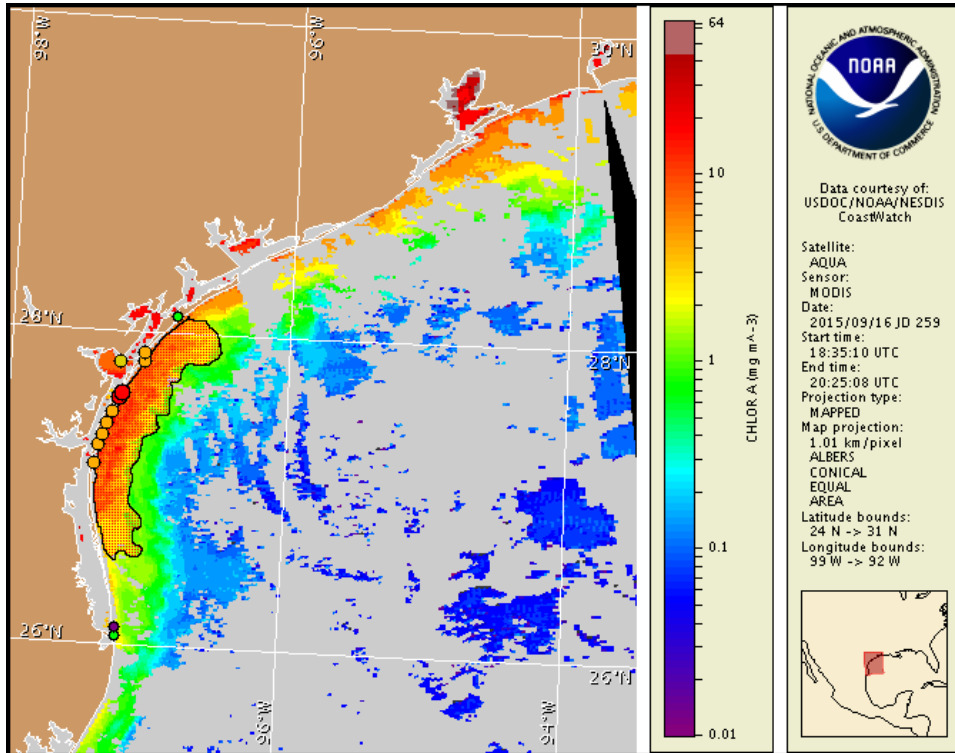
Thursday, 17 September 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 14, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 7 to 16: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast in the Port Aransas/Mustang Island to Padre Island National Seashore regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, September 17 through Monday, September 21 is listed below:

Region: Forecast (Duration)

Bay region-Aransas Bay: Moderate (Th-M)

Bay region-Corpus Christi Bay: Moderate (Th-M)

Port Aransas/Mustang Island to PINS region: High (Th-M)

Padre Island National Seashore region: Moderate (Th-M)

Beach Access 6 to Rio Grande region: Very Low (Th-M)

All Other Texas Regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Dead fish and respiratory irritation have been reported from the Port Aransas/Mustang Island to Padre Island National Seashore regions.

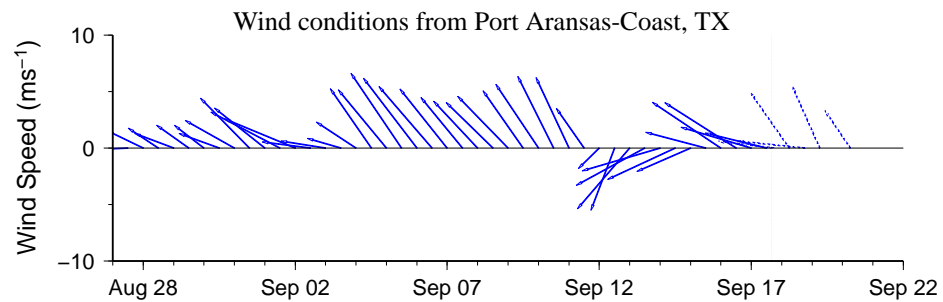
Analysis

Karenia brevis concentrations range from 'not present' to 'high' in Aransas Bay, Corpus Christi Bay, and along the coast from Port Aransas to the South Padre Island region. Recent samples collected by TPWD identified *K. brevis* at 'not present' to 'medium' concentrations within Aransas Bay and 'low b' within Corpus Christi Bay (9/16). In the Port Aransas/Mustang Island to PINS region, 'medium' to 'high' *K. brevis* concentrations were identified at several coastal locations from Horace Caldwell Pier to PINS Mile Marker #5, with the highest concentrations at Packery Channel Jetty and Bob Hall Pier (TPWD; 9/14-16). In the Beach Access 6 to Rio Grande region, 'very low a' *K. brevis* concentrations were identified from Starlight Circle along South Padre Island, but were 'not present' further south at Isla Blanca Park (TPWD; 9/14-16). Over the past few days, respiratory irritation has been reported from Port Aransas south to PINS Mile Marker #15 (TPWD; 9/14-16). Reports of dead fish that may be associated with the bloom have also been reported in a number of locations including the southern shores of Packery Channel and the gulf shores of Padre Island (TPWD; 9/15). Recent sampling from Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, is unavailable. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (9/15, shown left), is partially obscured by clouds along- and offshore the Texas coast from Sabine Pass to Pass Cavallo, limiting analysis. A feature of elevated to high chlorophyll (2-15 $\mu\text{g/L}$) is visible along- and offshore the Texas coastline adjacent to the area where the *K. brevis* bloom was confirmed from water samples and respiratory irritation. The full extent of the feature is not visible due to clouds that obscure the northernmost border, but it appears to stretch at least 120 km from 27.94263° N -96.93375° W to 26.81713° N -97.32765° W. Elevated chlorophyll visible elsewhere along the coast is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast.

Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 110 km south from the Port Aransas region, 60 km south from PINS Mile Marker #15 and 120 km south from the South Padre Island region from September 16-20.

Kavanaugh, Keeney

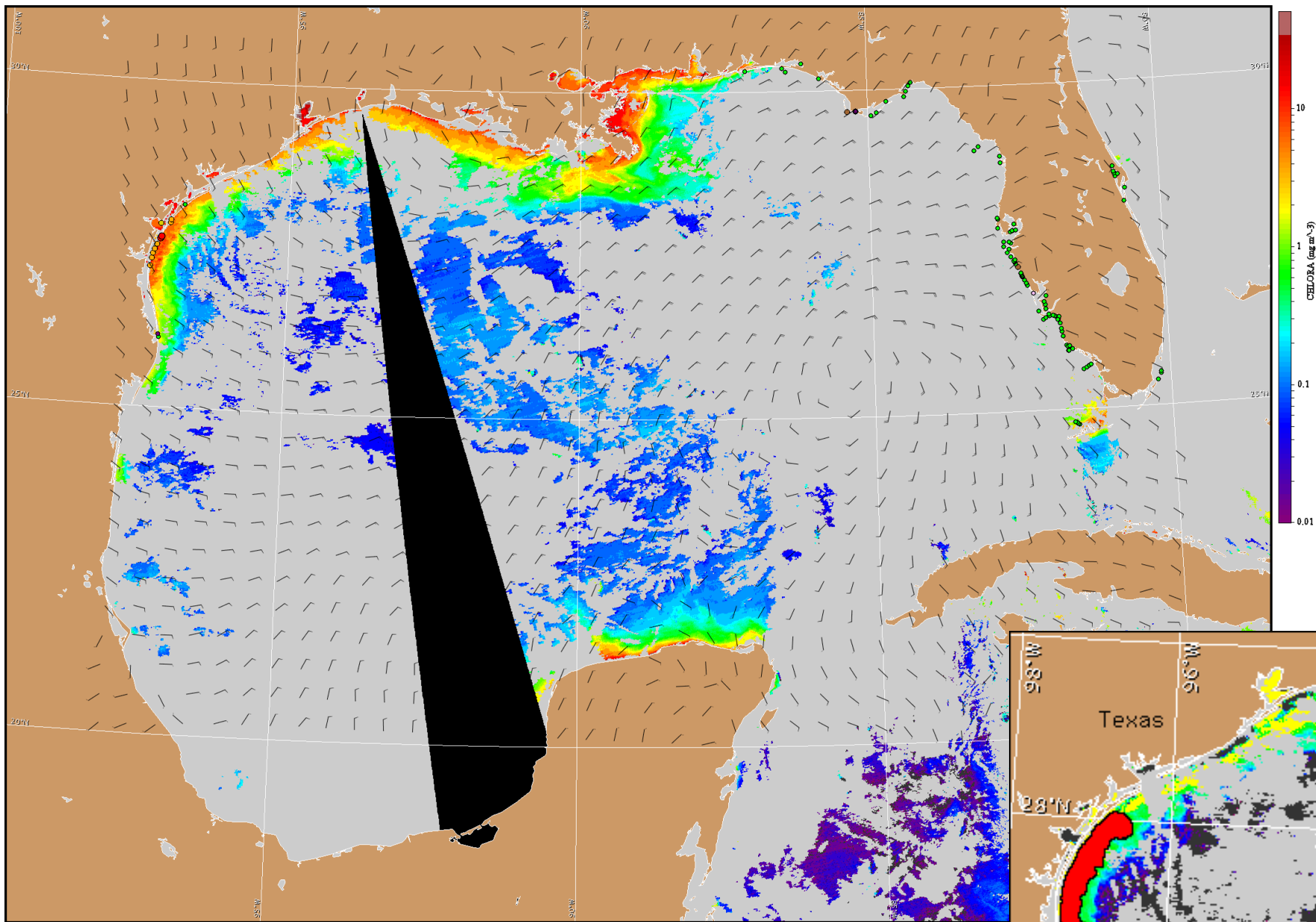


Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

-2-

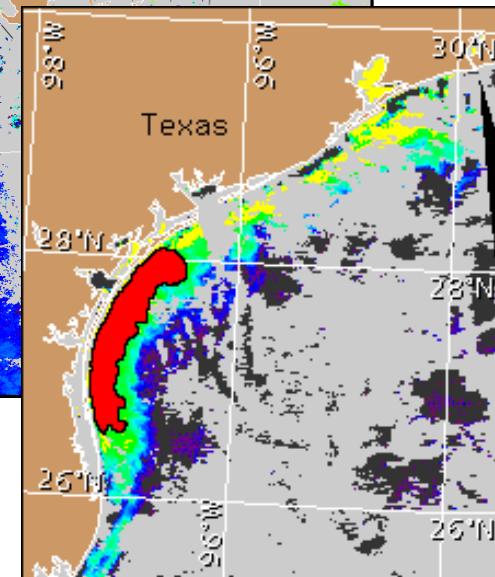
Wind Analysis

Port Aransas: East to southeast winds (5-15kn, 3-8m/s) today through Sunday shifting south after midnight Sunday. South winds (5kn, 3m/s) Monday becoming east (5kn) Monday afternoon. Southeast winds (5-10kn, 3-5m/s) Monday night.



Satellite chlorophyll image and forecast winds for September 18, 2015 06Z with points representing cell concentration sampling data from September 7 to 16: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf



Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).